

## Abstract

A process for transmitting sequences of signals/data from a transmitter to a receiver and for authenticating the sequences of signals/data consists of a precalculation phase and of a communication phase in which the signals are transmitted together with the checking sums. In the precalculation phase, a pseudo-random sequence is first generated by means of a cryptographic algorithm from a time-variable parameter and other initialization data. Non-overlapping sections ( $z(1)$  of a sequence ( $z$ ) having each  $m$  bits are associated to signals ( $s(i)$ ), wherein  $i = 1, 2, \dots n$ , of a signal storage. Further non-overlapping  $m$  bit sections ( $t(i)$ ) of the remaining sequence are selected for coding numbers ( $1, 2, \dots \text{MAX}$ ). The transmitter transmits the initialisation information and the time-variable parameters to the receiver and the receiver calculates the pseudo-random sequence ( $Z$ ) and checks the received authentication token ( $T$ ). The transmitter accepts the received signals as being authentic when the received authentication tokens match the calculated ones.